

PRACTICE - Gateway #1 - Simplifying Expressions
MUST SHOW WORK!!

1. $50 \div 5 \cdot 5$

$10 \cdot 5$

(50)

2. $[20 - (6 + 2)] \div 2$

$[20 - 8] \div 2$

$12 \div 2$

(6)

3. $\frac{10 + 15 \div 3 + 1}{7 - 3} = \frac{10 + 5 + 1}{4}$

$= \frac{16}{4} = (4)$

4. $[3 \cdot (-6 + 2\sqrt{36}) + 2] \div 4$

$[3(-6 + 12) + 2] \div 4$

$[3(6) + 2] \div 4$

$[18 + 2] \div 4$

$20 \div 4 = (5)$

5. $\frac{1}{6}[4^2 - (5 - 7)]$

$\frac{1}{6}[16 - (-2)]$

$\frac{1}{6}[18] = \frac{18}{6} = (3)$

6. $5a^2 + 8a - 9a + b^2$

$5a^2 - a + b^2$

7. $4(6x - 3y) + 5(2x + 7y)$

$24x - 12y + 10x + 35y$

$\boxed{34x + 23y}$

8. $6f - 8g - (3f + 7g - 5h)$

$6f - 8g - 3f - 7g + 5h$

$\boxed{3f - 15g + 5h}$

9. $8x(2x^2 - 9x + 4)$

$16x^3 - 72x^2 + 32x$

10. $(5x + 2)(x - 7)$

$5x^2 - 35x + 2x - 14$

$\boxed{5x^2 - 33x - 14}$

11. $\frac{5(x-3) + 3x}{5(4) + 5}$

$\frac{5x - 15 + 3x}{20 + 5}$

$\boxed{\frac{8x - 15}{25}}$